

## ABSTRACT OF THE DISCLOSURE

An optical information apparatus of the present invention includes:  
an optical pick-up head including: a light source; a diffraction unit; a  
condensing unit; a beam splitter; a photodetector; and a tracking error signal  
generator. An optical recording medium has tracks arranged substantially  
at a constant pitch. An average of a pitch is  $t_p$ . When a main beam is  
placed on the track, a first sub-beam and a second sub-beam are placed  
between the tracks. The tracking error signal generator performs a  
differential arithmetic operation with respect to signals output from a  
light-receiving portion receiving the main beam to generate a first push-pull  
signal, performs a differential arithmetic operation with respect to signals  
output from the light-receiving portions receiving the first sub-beam and the  
second sub-beam to generate a second push-pull signal, and performs a  
differential arithmetic operation with respect to the first push-pull signal and  
the second push-pull signal to generate a tracking error signal, in a case  
where an amplitude of the first push-pull signal obtained at the pitch  $t_p$  is  
fluctuated when the light beam is scanned in a direction orthogonal to the  
tracks of the optical recording medium.